

# Claims

- [c1] 1. An improved current limiting, high voltage, oil immersible fuse for interrupting high fault currents:
- (a) a tubular insulating casing and an inert granular arc-quenching material of high dielectric strength within said casing;
  - (b) one or more ribbon-type fuse elements being electrically connected in parallel when more than one is used. Adding more parallel combinations is for increasing nominal current ranges.
- [c2] (c) a pair of hermetically sealed end caps that electrically connect said elements
- (d) by means of solder/spot welding that completes the electrical connection.
- [c3] 2. An improved fuse as stated in claim 1 whereas said high fault current fuse elements being coated and sheathed in a gel of sodium silicate and sand compound.
- [c4] 3. An improved fuse as stated in claim 1 and 2 with a dielectric support positioned in said casing between said terminals wherein said sheathed fuse element is spirally wound around said dielectric support.

- [c5] 4. An improved fuse as stated in claim 3 whereas the sheathed element is kiln dried on the dielectric support after mounting.
- [c6] 5. An improved fuse as stated in claim 1 whereas the inert arc-quenching material is silica sand and completely fills said casing. Sand that has been taken from beaches or river beds that does not exhibit any sharp edges or cracks.
- [c7] 6. An improved fuse as stated in claim 1 whereas the high fault current element materials are pure or alloys of silver, copper, zinc, cadmium, aluminum or similar alloys thereof.
- [c8] 7. An improved fuse as stated in claim 1 whereto the said tubular insulating casing is a fiber laced glass/epoxy composite.
- [c9] 8. An improved fuse as stated in claim 3 whereas the dielectric element support is a mica or ceramic material.